

REMARKS

In view of the above amendments and the following remarks, further examination and reconsideration of the rejections in the Office Action of May 15, 2009 are respectfully requested.

On pages 3-6 of the Office Action, claims 20, 21, 24-27, and 30, 31, 33, and 34 are rejected under 35 USC § 103(a) as being unpatentable over McReynolds (US 6,191,043) in view of Collins et al. (EP 0472941); on pages 7 and 8 of the Office Action, claim 32 is rejected under 35 USC § 103(a) as being unpatentable over McReynolds in view of Collins, and further in view of Okumura (US 2003/0034542). The claims have been amended to overcome these rejections. Thus, the rejections are inapplicable to the amended claims for the reasons below, and withdrawal of the rejections is respectfully requested.

Claim 20 recites a plasma etching method using an etching gas which includes one of sulfur hexafluoride (SF_6) gas and nitrogen trifluoride (NF_3) gas, along with helium (He) gas, but does not contain oxygen (O_2) gas. Support for the limitation that the etching gas does not contain oxygen (O_2) gas is found in the second embodiment of the present invention, and in particular in paragraph 0045, for example. This is not disclosed by McReynolds, Collins, or Okumura.

McReynolds discloses an etching method. However, McReynolds discloses an etch using chlorine-containing chemistry, followed by etching with an etching gas comprising oxygen (O_2) gas and helium gas (He), and to which a fluorine-containing gas such as sulfur hexafluoride (SF_6) is later added (*McReynolds* Figures 4, 6; column 4, line 63 to column 5, line 18; column 5, line 66 to column 6, line 15). Thus, McReynolds does not disclose the etching gas as recited in claim 20.

Collins also discloses an etching method. Collins was relied on the Action as disclosing certain frequency ranges. However, Collins does not disclose an etching gas which includes one of sulfur hexafluoride (SF_6) gas and nitrogen trifluoride (NF_3) gas, along with helium (He) gas, but does not contain oxygen (O_2) gas. Thus, Collins does not obviate the shortcomings of McReynolds in this respect.

Okumura discloses a method of manufacturing a functional device. Okumura was only relied on in the Action as disclosing for disclosing that silicon is selectively etched by sulfur hexafluoride (SF_6) and carbon tetrafluoride (CF_4), and does not obviate the deficiencies of McReynolds and Collins discussed above.

Thus, the present invention as recited in claim 20 is not disclosed or rendered obvious in view of the disclosures in McReynolds, Collins, or Okumura, or any reasonable combination of the references. It is submitted that claim 20 is allowable over the prior art of record, as are claims 21, 25-27, and 30-34 depending therefrom.

In view of the foregoing amendments and remarks, it is respectfully submitted that the present application is clearly in condition for allowance. An early notice thereof is earnestly solicited.

If, after reviewing this amendment, the Examiner feels that there are any issues remaining which must be resolved before the application can be passed to issue, it is respectfully requested that the Examiner contact the undersigned by telephone in order to resolve such issues.

The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975.

Respectfully submitted,

Mitsuhiko OKUNE et al.
/Aldo A. D'Ottavio/
By: _____
2009.08.06 08:01:15 -04'00'

Aldo A. D'Ottavio
Registration No. 59,559
Agent for Applicants

AAD/JRF/ekb
Washington, D.C. 20005-1503
Telephone (202) 721-8200
Facsimile (202) 721-8250
August 6, 2009